

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

MAGNA DONNELLY CORPORATION,

Plaintiff and Counter-Defendant,

v.

3M COMPANY,

Defendant and Counter-Plaintiff.

Civil Action No. 07-cv-10688

District Judge Victoria A. Roberts
Magistrate Judge Laurie J. Michelson

REPORT AND RECOMMENDATION ON CLAIM CONSTRUCTION

Plaintiff Magna Mirrors of America, Inc. (“Magna”) brought this suit against Defendant 3M Company (“3M”) asserting that 3M infringed its patent titled “Interior Rear View Mounting System Utilizing One-Package Structural Adhesive,” U.S. Patent No. 5,587,236 (“236 patent”). Following claim-construction briefing by each party (Dkts. 54, 69, 72), the Court held a hearing in accordance with *Markman v. Westview Instruments*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

The Court has carefully considered the parties’ arguments and reviewed the patent prosecution history and, for reasons detailed below, RECOMMENDS the following constructions of the disputed claim terms:

- “non-elastomeric” means “not an elastic substance resembling rubber”;
- “structural adhesive” means “a non-elastomeric adhesive (i.e., not an elastic adhesive resembling rubber) designed to carry a load”; and
- “autoclave process” means “a cycle in which elevated pressure and elevated

temperature are established.”¹

I. BACKGROUND

A. The Technology of the '236 Patent

The '236 patent is directed to an automotive windshield and review mirror arrangement. Conventionally, manufacturers mounted review mirrors to windshields using a plasticized polyvinylbutyral (“PVB”) film adhesive. (Dkt. 72-4, '236 patent, col. 1, ll. 41-44.) PVB film was a preferred adhesive because the manufacturers could cure, i.e., harden, the PVB adhesive without substantially modifying the existing process for producing windshields. In particular, manufacturers produce automotive windshields by laminating two flat glass panels together with a sheet of PVB interlayer. (*Id.*, col. 1, ll. 15-21.) To laminate this glass-PVB-glass assembly, manufacturers heat the assembly in an autoclave. By using PVB to adhere a “mirror button” (essentially an anchor for the review mirror assembly) to the windshield, the manufacturers could cure the mirror-button adhesive at the same time that they laminated the windshield. (*Id.*, col. 1, ll. 41-62.)

Although compatible with the windshield manufacturing process, “the use of PVB film [for mounting mirror assemblies had] some disadvantages.” ('236 patent, col. 1, ll. 63-65.) In particular, it was an “elastomeric, thermoplastic material with relatively poor load-bearing properties.” (*Id.*, col. 1, ll. 65 - col. 2, ll. 1.) As rearview mirrors became heavier, PVB-attached mirrors became more susceptible to vibration during driving, or in hot climates, falling off altogether. (*See id.*, col. 2, ll. 8-25.)

The '236 patent is directed to a “rearview mirror/windshield arrangement” produced by using

¹A chart summarizing the parties’ proposed constructions and this Court’s proposed constructions is attached as Appendix A to this Report and Recommendation.

certain “structural adhesives” for mounting a rearview mirror assembly to an automotive windshield. ('236 patent, col. 1, ll. 10-14.) More specifically, the BRIEF SUMMARY OF THE INVENTION describes the use of a stronger and more rigid adhesive that remains curable during the conventional windshield laminating process:

The present invention comprises a vehicle accessory mounting button, windshield arrangement and a method for making the same which uses nonelastomeric, thermosetting, structural adhesives to adhere an accessory mounting button to the interior surface of a windshield. It has been surprisingly found that nonelastomeric, thermosetting, structural adhesives provide outstanding long-term adhesion and good accessory assembly vibration performance even under rigorous climate conditions while simultaneously being compatible with conventional autoclaving processes used in windshield manufacturing.

(*Id.*, col. 2, ll. 45-55.)

B. Procedural History of the '236 Patent

The application of the '236 patent was a divisional of a parent application: U.S. Patent Application Serial No. 07/733,236 filed in October 1991. (Dkt. 42, 3M's Counterclaim ¶¶ 5-6.) During prosecution of the parent application, the examiner found that it impermissibly claimed three inventions: claims 1 to 22 were drawn to a mirror mounting assembly, claims 23 to 34 were drawn to a method of laminating, and claims 35 and 36 were drawn to a mounting button. (Dkt. 69, 3M's Claim Constr Br., Ex. B at B-39.) In response to the examiner's election/restriction requirement, Magna proceeded with the method invention in the parent application but filed a divisional application, based on the same specification as the parent application, for the mirror mounting assembly. (*Id.*, Ex. C at C-6 to C-38, Ex. D at D-347.)

On May 10, 1995, Raj K. Agrawal, Niall R. Lynam, and James K. Galer (“patentees”), filed the divisional application, U.S. Patent Application Serial No. 08/438,612, which later issued as the

'236 patent. (*Id.*, Ex. C at C-6.) Claim 1 of the application was inherited verbatim from the parent application. (*Id.*, Ex. C at C-23; *see also id.*, Ex. B at B-23.) With further amendments, application claim 1 ultimately issued as claim 1 of the '236 patent. Along with the divisional application, the patentees also filed a “Preliminary Amendment” to add a claim 37 to the divisional application. Application claim 37, with further amendments, ultimately issued as claim 20 of the '236 patent. The '236 patent issued on December 24, 1996. (3M’s Counterclaim ¶ 5.)

Magna filed this suit against 3M in February 2007. The Court stayed the action pending the outcome of patent reexamination proceedings before the U.S. Patent and Trademark Office. (*See* Dkts. 1, 16, 18.) On reexamination, the patent examiner concluded that the claims of the '236 patent were obvious in view of the prior art. *See Ex Parte Donnelly Corp.*, Appeal No. 2009-014598, Reexamination Control No. 90/008676, 5-6 (Bd. Pat. App. Jan. 5, 2010). Magna then appealed that decision to the Board of Patent Appeals and Interferences (“BPAI”). The BPAI concluded that Magna failed to demonstrate that the examiner reversibly erred in concluding that “a person of ordinary skill in the art would have had reasons to substitute the adhesive described in Ryan [U.S. Patent No. 3,131,251], or ‘the admitted prior art and Ono [U.S. Patent No. 5,160,780]’ with a commercially-available structural adhesive within the scope of the appealed claims.” *Id.* at 15. But the BPAI reversed the examiner’s “final obvious conclusion because the [e]xaminer failed to properly consider all [of Magna’s rebuttal] evidence anew.” *Id.* at 15. This included Magna’s argument that one of the preferred adhesives mentioned in the '236 patent provided unexpected results. *Id.* at 14. On or around October 28, 2010, the Court lifted the stay in this case. (Dkt. 18.)

On February 9, 2012, Magna filed its opening claim construction brief. (Dkt. 54, Magna’s Claim Constr. Br.) At the time, the parties had not reached agreement on the meaning of 13 terms.

(*See* Magna’s Claim Constr. Br. at 1.) Pursuant to this Court’s February 24, 2012 Order, the parties conferred and narrowed the number of disputed claims. (*See* Dkt. 69, 3M’s Claim Constr. Br. at 18 n.2.) On March 15, 2012, 3M filed its claim construction brief and seeks construction of only three claim terms: “non-elastomeric,” “structural adhesive,” and “autoclave process.” On March 30, 2012, Magna filed its reply brief addressing these three terms. (Dkt. 72.) On May 18, 2012 this Court held a *Markman* hearing where the parties provided the Court with presentation materials regarding claim construction. After the hearing, both sides submitted letter briefs to the Court with further arguments regarding the disputed claim terms. (Dkts. 92, 96, 97.) The Court has carefully considered all of the materials provided by the parties.

C. The Claims of the '236 Patent

The '236 patent has five independent claims: claims 1, 20, 35, 43, and 46 (the latter two added during patent reexamination). As suggested by this Court’s summary of the patent prosecution history, claims 1 and 20 are representative.

Claim 1 provides:

1. A mirror mounting button, windshield arrangement, comprising:

a windshield, said windshield including an interior surface;

a cured *non-elastomeric*, thermosetting, one-package, *structural adhesive* in contact with and adhered to said interior windshield surface, said adhesive having a modulus of elasticity at 85° C. of at least about 10,000 psi, said *structural adhesive* being a latent curing adhesive system capable of substantial cure at a temperature below about 325° F. and requiring exposure to a temperature in excess of about 125° F. before substantial curing is achieved; and

a mirror mounting button attached to said adhesive, whereby said cured adhesive forms a bond between said windshield and said mirror mounting button, wherein said adhesive bond can support a weight greater than or equal to about 100 grams.

('236 patent, col. 8, ll. 7-24 (disputed claim terms emphasized).)

Claim 20 provides:

20. An interior rearview mirror mounting system for use on an automobile comprising:

a laminated windshield;

said windshield comprising a first bent glass panel having a front surface and a rear surface, and a second bent glass panel having a front surface and a rear surface;

a sheet of polymeric interlayer disposed between the rear surface of said first panel and the front surface of said second panel wherein said polymeric interlayer laminates said first and second panel together, said lamination together of said first panel and said second panel being achieved by an *autoclave process*;

a mirror mounting button adhered to said rear surface of said second panel by a layer of substantially cured adhesive and

an interior rearview mirror assembly supported by said button;

said layer of substantially cured adhesive being formed by disposing a film of a one-package, *structural adhesive* between said rear surface of said second panel and said mirror mounting button, and curing said film in an *autoclave process* to form a joint between said button and said windshield, said curing of said film and said lamination of said windshield being achieved in the same *autoclave process*; and

said film of *structural adhesive* comprising an epoxy resin and a latent hardener.

('236 patent, col. 9, ll. 20-47 (disputed claim terms emphasized).)

II. CLAIM CONSTRUCTION FRAMEWORK

The claims of a patent define the invention that the patentee is entitled to exclude others from practicing. *Am. Calcar, Inc. v. Am. Honda Motor Co., Inc.*, 651 F.3d 1318, 1336 (Fed. Cir. 2011). Thus, the purpose of claim construction “is to determine the meaning and scope of the patent claims that the plaintiff alleges have been infringed.” *See Every Penny Counts, Inc. v. Am. Express Co.*, 563 F.3d 1378, 1381 (Fed. Cir. 2009). Claim construction is a question of law for the court. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc); *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (“When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute.”).

Claim terms are generally given their ordinary and customary meaning, i.e., “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc); *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1371 (Fed. Cir. 2007) (“Claim terms are entitled to a ‘heavy presumption’ that they carry their ordinary and customary meaning to those skilled in the art in light of the claim term’s usage in the patent specification.”). In many cases, however, the meaning of a claim term as understood by persons of skill in the art is not immediately apparent to those unskilled in the art, for example, judges. *Id.* As such,

the court looks to those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean. Those sources include the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

Id. at 1314 (internal quotation marks and citations omitted).

Claims themselves can provide substantial guidance as to the meaning of a disputed term. *Phillips*, 415 F.3d at 1314. For example, in *Phillips*, the Federal Circuit noted that the claim term “steel baffles” strongly implied that “‘baffles’ does not inherently mean objects made of steel.” *Id.* In addition, other claims can shed light on the meaning of a claim term. *Id.* To this end, claim terms are normally used consistently throughout a patent and thus, the term’s use in one claim may inform the term’s use in another. *Id.* Further, the doctrine of claim differentiation may be useful in discerning the meaning of a disputed term. *Id.* “For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1315.

Claims do not exist in a vacuum, however; rather, they are part of the specification and must be read in view of the written description. *Phillips*, 415 F.3d at 1315. “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). In *Phillips*, the Federal Circuit noted that the specification may reveal “a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess” or “an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Id.* at 1316.

Claim terms should also be construed in light of the patent prosecution history. *Phillips*, 415 F.3d at 1317. The prosecution history, which is considered “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.” *Id.* Similar to the specification, “the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the

invention and whether the inventor limited the invention” by disclaiming a particular interpretation of a claim term. *Id.*

Although less reliable than intrinsic evidence, a court may also rely on extrinsic evidence “which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317. In *Phillips*, the Federal Circuit pointed out that, for a variety of reasons, extrinsic evidence is less reliable than intrinsic evidence. *Id.* at 1318-19 (“[U]ndue reliance on extrinsic evidence poses the risk that it will be used to change the meaning of claims in derogation of the ‘indisputable public records consisting of the claims, the specification and the prosecution history,’ thereby undermining the public notice function of patents.”); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“[I]n interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.”). Nonetheless,

there is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence. For example, a judge who encounters a claim term while reading a patent might consult a general purpose or specialized dictionary to begin to understand the meaning of the term, before reviewing the remainder of the patent to determine how the patentee has used the term. The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law.

Phillips, 415 F.3d at 1324 (internal citations omitted).

III. APPLICATION

The parties dispute the meaning of three claim terms: “non-elastomeric,” “structural adhesive,” and “autoclave process.” The Court considers these terms in turn.

A. “non-elastomeric”

Magna maintains that the Court need not construe the claim term “non-elastomeric” and that the term should be accorded its plain and ordinary meaning. (Magna’s Claim Constr. Br. at 12.) Arguing in the alternative, Magna asserts that the plain and ordinary meaning of the term “non-elastomeric” is “[n]ot an elastic substance resembling rubber.” (*Id.*) In support of its position, Magna cites a recent Federal Circuit decision, *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362 (Fed. Cir. 2012). *Thorner* held that “words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history” unless (1) “a patentee sets out a definition and acts as his own lexicographer,” or (2) “the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Id.* at 1365 (citing *Vitronics*, 90 F.3d at 1580).

3M maintains that both exceptions apply. According to 3M, the patentees of the '236 patent defined the term “non-elastomeric” in the specification as “having a modulus of elasticity cured greater than about 10,000 psi at 85° C.” (3M’s Claim Constr. Br. at 4-6.) 3M also argues that during prosecution, the patentees disclaimed any other interpretation of the term non-elastomeric. (*Id.* at 7-8.)

1. An Analysis of the Claims Disfavors 3M's Construction

The Court begins with a review of the claims. *See Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (“In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves” (quotation and alterations omitted)). Claim 1 is the only claim of the '236 patent that explicitly uses the term “non-elastomeric” to describe the adhesive element of the claim. But claim 1 also includes the following limitation: “said adhesive having a modulus of elasticity at 85° C. of at least about 10,000 psi.” ('236 patent, col. 8, ll. 13-15.) If, as 3M asserts, the patentees had defined the term non-elastomeric to mean “having a modulus of elasticity cured greater than about 10,000 psi at 85° C.,” this limitation of claim 1 would be superfluous. A claim construction that renders claim language superfluous is disfavored. *See Digital-Vending Services Int'l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) (finding construction that rendered claim language surplusage was “contrary to the well-established rule that ‘claims are interpreted with an eye toward giving effect to all terms in the claim.’” (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006))); *Fifth Generation Computer Corp. v. Int'l Bus. Machines Corp.*, 416 F. App'x 74, 79 (Fed. Cir. 2011) (“Th[e] [public] notice function would be undermined . . . if courts construed claims so as to render characteristics specifically described in those claims superfluous. As such, we construe claims to give effect to all of their terms.” (internal citation omitted)).

The Court acknowledges that in the face of an undeniable definition, the cannon of claim construction invoked here, that all claim terms are to be given meaning, must yield. *Cf. Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1359 (Fed. Cir. 2012) (explaining that where the specification and the doctrine of claim differentiation conflict, “claim differentiation is ‘not a

hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history.”). However, for reasons set forth below, the Court does not find that the specification clearly defined the term “non-elastomeric.” Thus, the fact that 3M’s proposed definition is inconsistent with claim language remains probative of whether the patentees clearly expressed an intent to redefine the term.

2. *The Patentees Did Not Define “non-elastomeric” in the Specification*

“To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning.” *Thorner*, 669 F.3d at 1365. “It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.” *Id.*; *see also Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (“We have previously held that, in redefining the meaning of particular claim terms away from the ordinary meaning, the intrinsic evidence must ‘clearly set forth’ or ‘clearly redefine’ a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term. We have also stated that the specification must exhibit an ‘express intent to impart a novel meaning’ to claim terms.” (internal citations omitted)). However, as 3M correctly states, “a claim term may be clearly redefined without an explicit statement of redefinition.” *Bell Atl. Network Servs.*, 262 F.3d at 1268. “In other words, the specification may define claim terms ‘by implication’ such that the meaning may be ‘found in or ascertained by a reading of the patent documents.’” *Id.*

3M argues that the patentees of the '236 patent defined “non-elastomeric” in the specification. In particular, 3M relies on the following passage from the written description:

In addition to the improved bonding performance which results from use of structural adhesives such as AF-163-2, these adhesives are

nonelastomeric and, as such, have a modulus of elasticity, when cured, greater than about 30,000 psi at 25° C. and greater than about 10,000 psi at 85° C. Thus, they exhibit superior vibration performance when compared to elastomeric materials such as plasticized PVB and silicones such as Dow Corning® X4-4647 silicone elastomer and Dow Corning© X4-4643 silicone elastomer Plasticized PVB has a modulus of elasticity of about 1000-1500 psi at 25° C. and 260 psi at 85° C. whereas silicones, which are elastomeric materials also conventionally used as a mirror mounting adhesive, typically have a modulus of elasticity of below 500 psi at 85° C.

('236 patent, col. 7, ll. 49-62 (emphasis added).) 3M essentially reads the emphasized language as follows: “structural adhesives such as AF-163-2 . . . are nonelastomeric and, as [nonelastomeric adhesives] have a modulus of elasticity, when cured, greater than about 30,000 psi at 25° C. and greater than about 10,000 psi at 85° C.” (See 3M’s Claim Constr. Br. at 5.)

As an initial matter, the Court notes that while 3M’s reading of the sentence in question may be the preferred reading, the statement is amenable to a construction that favors Magna. Two phrases are critical: “such as” and “as such.” The former, when not offset by commas, could arguably mean “like” or “similar to.”² Thus, the first part of the sentence in question could be interpreted as: “In addition to the improved bonding performance which results from use of structural adhesives [like] AF-163-2, these adhesives are nonelastomeric,” The phrase “these adhesives” would then refer to those “structural adhesives [like] AF-163-2.” Thus, the sentence

²*The Chicago Manual of Style* ¶ 6.27 (16th ed. 2010) (explaining that “such as” when not set off by commas is a restrictive use, for example, “Words such as matutinal and onomatopoetic are best avoided in everyday speech.”); see also H.W. Fowler, *The New Fowler’s Modern English* 750 (3d ed. 1996) (“Opinion is neatly divided about the merits of *like* or *such as* used to introduce examples of a class. There is abundant evidence for *like* to be used when only one item, person, etc. is specified (*a writer like Tennyson*), and equally abundant evidence for *such as* to be used the same way (*Many large gold coins, such as the doubloon*). The choice is often governed by the meaning: if the sense required is ‘resembling’ then *like* is preferable. . . .”).

would read, “In addition to the improved bonding performance which results from use of structural adhesives [like] AF-163-2, [structural adhesives like AF-163-2] are nonelastomeric and, as such, have a modulus of elasticity, when cured, . . . greater than about 10,000 psi at 85° C.” Turning to the phrase “as such,” the “such” refers to the antecedent clause.³ Here, that would be “[structural adhesives similar to AF-163-2] are nonelastomeric.” Thus, the entire sentence could reasonably be interpreted as “In addition to the improved bonding performance which results from use of structural adhesives [like] AF-163-2, [structural adhesives like AF-163-2] are nonelastomeric and, as [nonelastomeric, structural adhesives like AF-163-2], have a modulus of elasticity, when cured, . . . greater than about 10,000 psi at 85° C.” Under this reading, the limitation of “about 10,000 psi at 85° C” applies only to nonelastomeric, structural adhesives *similar to AF-163-2* – not, as 3M argues, all nonelastomeric adhesives. That is, it is a limitation of those adhesives akin to the most preferred embodiment.

Context supports this conclusion. First, the definitional nature of the statement is lessened because it does not occur within a discussion about the claimed invention as a whole. *Cf. Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (“When a patent thus

³See *The Chicago Manual of Style Online*, http://www.chicagomanualofstyle.org/CMS_FAQ/Usage/Usage165.html (visited June 4, 2012) (“‘As such’ is not a substitute for ‘therefore.’ Rather, ‘such’ must refer to an antecedent noun or noun phrase in order for ‘as such’ to make grammatical sense (and yes, it’s a matter of grammar).”); *The Chicago Manual of Style* ¶ 5.220 (16th ed. 2010) (“This pronominal phrase is now often loosely used as a synonym for *therefore*, but in well-honed writing the *such* always requires an antecedent {diamond-studded water bottles are a luxury and, as such, have a limited market}”).

The Court notes that 3M’s argument would be stronger had the phrase in question been “these adhesives are nonelastomeric [adhesives] and, as such, . . .” In that case, the “such” would refer to the antecedent noun “nonelastomeric adhesives.” But, as written, the “such” arguably refers to the entire antecedent clause, i.e., “[structural adhesives like AF-163-2] are nonelastomeric.” It is important to note that the Court is not saying that 3M’s construction is not preferred, only that another construction is plausible, and, therefore, the alleged definition is not clear.

describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.”); *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1348 (Fed. Cir. 2004) (reasoning that statements found in the “Summary of the Invention” portion of the specification were not limited to describing a preferred embodiment, “but more broadly describe[d] the overall inventions of all three patents.”). Rather, the paragraph containing the statement 3M relies upon discusses a particular feature of the claimed invention: that non-elastomeric structural adhesives having “a modulus of elasticity, when cured, greater than about 30,000 psi at 25° C. and greater than about 10,000 psi at 85° C.,” “exhibit superior vibration performance when compared to” certain, “elastomeric” prior-art adhesives with lower moduli of elasticity. (’236 patent, col. 7, ll. 54-55.) Second, the paragraph itself is contained in a section of the specification titled “EXAMPLES.” And the paragraph that follows the one in question states: “It is to be understood that while certain specific forms and examples of the present invention are illustrated and described herein, the invention is not to be limited to the specific examples noted hereinabove.” (’236 patent, col. 7, ll. 63-66.) In short, one would not expect to find a definition of a claim term in a paragraph discussing a single feature of the claimed invention where the paragraph is, in turn, within a section providing examples or preferred embodiments of the claimed invention.

In its post-*Markman* hearing letter-brief, 3M takes a different view of the importance of context: “a definition provided in the course of describing a preferred embodiment is nonetheless a definition.” (Dkt. 92-2, 3M’s Claim Constr. Letter Br. at ECF Pg ID 5057.) 3M relies on *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322 (Fed. Cir. 2009) and *Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1377 (Fed. Cir. 2005) for the proposition that “the location within the specification in which the definition appears is irrelevant,” 582 F.3d at 1334. (*Id.*) The Court does

not quarrel with the proposition that the location of a definition in a patent specification is not relevant where the definition is undeniable (e.g., “_____ means _____”). In fact, this was the situation in *Edwards Lifesciences* and *Boss Control*. See *Edwards Lifesciences*, 582 F.3d at 1334 (finding patentees defined “malleable” where specification provided that wires were “[malleable] and may be bent into any desired shape, ie [sic] they are not resilient to any substantial extent so that they have to be physically expanded into contact with the aorta rather than expanding by virtue of their own resilience.”); *Boss Control*, 410 F.3d at 1377 (finding that “interrupt” should not be given a plain and ordinary meaning where “Summary of the Invention” section provided that “one aspect of the invention[,], the appliance or device retains a connection to the power supply while in interrupt or ‘locked’ mode” and, in describing a preferred embodiment, the patentees further provided “[i]t will be understood that in the described embodiments the device in the interrupt mode does not actually cut off power to the appliance, i.e. interrupt the main power supply”). But here, the patentees of the '236 patent did not use “i.e.” Instead, they used the more ambiguous “as such” (which, as shown above, is amenable to more than one plausible reading). Thus the context of the “as such” statement remains relevant in this case.

Additionally, there are other statements in the specification that support the Court’s conclusion. The very first sentence of the section titled “DESCRIPTION OF THE PREFERRED EMBODIMENT,” includes the modulus of elasticity limitation in question. It reads, “Thermosetting structural adhesives suitable to achieve the objectives of this invention include one-package epoxies, preferably in film form, which have a cure temperature below 325° F., a modulus of elasticity at 85° C. of at least about 10,000 psi when cured, and are compatible with current windshield manufacturing processes.” (’236 patent, col. 3, ll. 3-8.) This sentence, by virtue of (1) immediately

following the heading “description of the preferred embodiment” and (2) using the words “suitable” and “include,” describes a preferred embodiment rather than the claimed invention as a whole. Later in the same section, the patentees provide that the “most preferred” adhesive is AF-163-2. (*Id.*, col. 3, ll. 53-60.) Together, these two statements imply that preferred adhesives have “a modulus of elasticity at 85° C. of at least about 10,000 psi when cured” and the most preferred adhesive, as a member of that class, also has that limitation. This supports the Court’s construction of the “as such” sentence: the patentees implied that *preferred* adhesives, including AF-163-2, are nonelastomeric and have “a modulus of elasticity at 85° C. of at least about 10,000 psi when cured,” but may not have meant that *all* nonelastomeric adhesives have that limitation. Additionally, the Court notes that where the patentees did discuss the invention as a whole – such as in the abstract and summary of invention sections – they did not include the specific modulus of elasticity language 3M relies on: “the *present invention comprises* a vehicle accessory mounting button, windshield arrangement and a method for making the same which uses nonelastomeric, thermosetting, structural adhesives to adhere an accessory mounting button to the interior surface of a windshield.” (’236 patent, col. 2, ll. 44-54 (emphasis added).)

In sum, considering the entire specification – including reading the claims to avoid rendering claim language superfluous – the Court cannot conclude that “the patentee[s] [of the ’236 patent] . . . ‘clearly express[ed] an intent’ to redefine the term,” “non-elastomeric” to something other than its plain and ordinary meaning. *See Bell Atl. Network Servs.*, 262 F.3d at 1268; *see also Thorner*, 669 F.3d at 1365 (providing that a patentee must “‘clearly express an intent’ to redefine the term”); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002) (“We indulge a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”).

3. *The Patentees Did Not Disclaim Adhesives That Do Not Have The Specific Modulus of Elasticity Limitation*

3M also asserts that the prosecution history evidences that the patentees of the '236 patent “clearly disclaimed any non-elastomeric adhesives that do not have a modulus of elasticity of at least 10,000 psi at 85° C.” (3M’s Claim Constr. Br. at 7.) The Court finds, however, that the prosecution history does not evidence a clear disavowal of those adhesives having a modulus of elasticity less than about 10,000 psi at 85° C.

The doctrine of prosecution disclaimer prevents the patentee from recapturing through claim interpretation specific meanings disclaimed during prosecution. *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The doctrine also “promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Id.* “To balance the importance of public notice and the right of patentees to seek broad patent coverage,” the Federal Circuit has “consistently rejected prosecution statements too vague or ambiguous to qualify as a disavowal of claim scope.” *Omega*, 334 F.3d at 1325; *Thorner*, 669 F.3d at 1366 (describing the standard for disavowal of claim scope as “exacting”). Thus, the doctrine of prosecution disclaimer will not apply where the patentee’s statements are amenable to multiple interpretations. *Omega*, 334 F.3d at 1324. Instead, the Federal Circuit requires that the “alleged disavowing statements . . . be both so clear as to show reasonable clarity and deliberateness . . . and so unmistakable as to be unambiguous evidence of disclaimer.” *Id.* at 1325 (internal citations omitted).

(a) Prosecution History of the Parent Application

Beginning with the prosecution of the parent application of the '236 patent, 3M points out (albeit regarding another claim term) that in response to the patent examiner's rejection, the patentees argued:

To achieve the objectives of the invention, an adhesive having a cure temperature below 325° F is utilized to reduce any deterioration of the polymeric interlayer between the layer between the windshield panels. Application page 1, lines 24 to 26. . . . *A modulus of elasticity at 85° C of at least 10,000 psi when cured* is desired to achieve superior vibration performance, particularly in hot climates, compared to elastomeric materials, such as plasticized PVB and silicone, which are conventionally used as mirror mounting adhesives. Page 3, lines 13 to 23 and page 14, lines 1 to 15.

(3M's Claim Constr. Br., Ex. B at B-152-53 (emphases added).)

The emphasized statements, while supportive of 3M's position, are not sufficiently explicit for this Court to conclude that this disclaimer applies to all claims of the '236 patent. Although 3M reasonably focuses on the whole-invention language, "To achieve the objectives of the invention," the context surrounding this statement cannot be ignored. Each claim of the parent application included a limitation that the adhesive have a modulus of elasticity at 85° C of at least about 10,000 psi when cured. In contrast, claim 20 of the '236 patent contains no such limitation. Thus, it does not necessarily follow that "the objectives of the invention" of the parent application and the objectives of the invention of the '236 patent are coextensive. In fact, the paragraph containing the passage relied upon by 3M begins "Independent claims 23 and dependent claims 24-25 recite methods" (3M's Claim Constr. Br., Ex. B at B-152). Claim 23 of the parent application was not made part of the divisional application which became the '236 patent. In short, absent a disavowal outside of the context of a specific claim of the '236 patent's parent application – a claim

that already included the proposed modulus-of-elasticity limitation – the Court cannot conclude that this was a clear disclaimer of claim scope such that it should apply to claims unique to the '236 patent (e.g., claim 20).

(b) Prosecution History of the '236 Patent

3M next points to the following statements made by the patentees during prosecution of the divisional application that resulted in the '236 patent. (3M's Claim Constr. Br. at 12.)

Contrary to the teachings of Stewart [a prior art reference], applicant discloses at page 14, lines 6-15 that the claimed thermosetting structural adhesives exhibit superior vibration performance when compared to elastomeric materials such as the silicone elastomers preferred by Stewart. Further, it is unlikely that one having ordinary skill in the art would utilize a thermosetting structural adhesive having a modulus of elasticity of at least 10,000 psi in view of Stewart's pronounced preference for silicone rubber elastomers which typically have a modulus of elasticity below 500 psi at 85° C.

(*Id.*, Ex. C at C-67.) 3M argues, "Critically, the patentees made [this] statement with respect to all of the patent claims, including ones that lacked the modulus of elasticity limitation." (*Id.* at 12.) Accordingly, concludes 3M, all claims include the adhesive limitation of "having a modulus of elasticity of at least 10,000 psi" at 85° C.

It is true that five paragraphs prior to the quoted passage the patentees stated, in summarizing the patent examiner's rejection, "Claims 1-16 and 37-41, 52 and 53 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ryan in view of Stewart, Aikens et al. and the Adhesives Handbook." (*Id.*, Ex. C at C-66.) Nonetheless, the Court cannot conclude that this was a clear disavowal of claim scope as to independent claim 20 (then application claim 37), 35, 43, or 46. The Federal Circuit's decision in *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327 (Fed. Cir. 2004) is instructive in this regard.

In *Golight*, the claimed invention was directed to a portable search light. 355 F.3d at 1329. Wal-Mart, the accused infringer, sold a search light with rotation restricted to “somewhere between 340° and 351°.” *Id.* at 1329. Claim 11 of the patent at issue included the phrase “horizontal drive means for rotating said lamp unit in a horizontal direction” and Wal-Mart asserted that this claim language “implicitly requires the [patented] search light to be capable of rotating through 360°.” *Id.* at 1331. In support of its implicit-limitation argument, Wal-Mart asserted that the patentees disavowed broader claim scope during patent prosecution by making the following statements:

Claims 6 and 9 to 16 [which issued as claim 11] have been rejected . . . based on claims 1 to 14 of the '046 patent in view of Lipman. The Examiner might be justified in taking notice of equivalence of wireless remote control and hard-wired controls for achieving the same end result but that does not justify applying to *wholly different types of adjustment and particularly where the claims recite the separate horizontal and vertical drive means for tilting and rotating as well through 360° as the separate receiver channels coupled to the respective drive means to carry out two entirely different types of adjustments; namely, tilting and rotation.*

Id. at 1333 (emphasis in original). The Federal Circuit noted that while other claims included the “through 360°” limitation, claim 16 of the patent application – which issued as claim 11 – did not.

Id. at 1330. The Court analyzed the alleged disavowal of claim scope as follows:

[The] [patentees] statements can be reasonably interpreted as meaning that (1) in general, Lipman does not allow two types of adjustment (tilting and rotating) through separate receiver channels and drive means and, therefore, Lipman has a “wholly different type of adjustment” from that specified in pending claims 6 and 9-16; and (2) more specifically, Lipman is different from those *particular* claims (pending claims 6 and 9-15) that recite [the limitation] “separate horizontal and vertical drive means for tilting and rotating as well through 360°.” In other words, the patentees’ statements about Lipman’s inability to rotate through 360° were made to distinguish only those claims that explicitly recited a 360° limitation. Claim 16, which issued as claim 11 now in dispute, has no such limitation.

Id. at 1333. The Court concluded, “These statements therefore do not rise to the level of a clear disavowal of scope with respect to pending claim 16.” *Id.*

The reasoning of *Golight* applies here. Claim 1 of the '236 patent includes a limitation equivalent to the alleged disavowal (an adhesive having a modulus of elasticity at 85° C. of at least about 10,000 psi). Claim 20, and the other independent claims, do not have this limitation. Thus, in arguing that “it is unlikely that one having ordinary skill in the art would utilize a thermosetting structural adhesive having a modulus of elasticity of at least 10,000 psi in view of Stewart’s pronounced preference for silicone rubber elastomers,” the patentees here, like the patentees in *Golight*, could have been making either of two distinctions. The patentees might have meant, as 3M asserts, that all claims of the '236 patent application are patentable over Stewart because all claims include “a thermosetting structural adhesive having a modulus of elasticity of at least 10,000 psi.” But another plausible interpretation is that the patentees were using the modulus-of-elasticity limitation explicit in claim 1 to distinguish that particular claim from the Stewart reference. Given this ambiguity, the language cited by 3M was not a clear disavowal. *See Golight*, 355 F.3d at 1333.

(c) Prosecution History During Patent Reexamination

3M next asserts that Magna disclaimed claim scope during patent reexamination proceedings. (3M’s Claim Constr. Br. at 7.) 3M points to the following statement made by Magna during reexamination:

[O]ne of ordinary skill in the art at the time of the Agrawal et al. invention would have chosen one of the elastomeric silicone rubber or PVB adhesives, rather than to choose a cured nonelastomeric, thermosetting, one-package, structural adhesive in contact with and adhered to the interior windshield surface, with the adhesive having a modulus of elasticity at 85° C of at least about 10,000 psi, and with the structural adhesive being a latent curing adhesive system capable

of substantial cure at a temperature below about 325° F and requiring exposure to a temperature in excess of about 125° F before substantial curing is achieved

(3M's Claim Constr. Br. at 7 (citing *id.*, Ex. D at D-206).)

While the portion quoted immediately above supports 3M's position, the remainder of the statement undermines it. The quoted statement continues: "or with the one-package, structural adhesive comprising an epoxy resin and a latent hardener, such as a dicyanodiamide latent hardener, such as is specified in the claims of this reexamination of the '236 patent." (3M's Claim Constr. Br., Ex. D at D-206.) The omitted language is telling because claim 1 of the '236 patent includes a limitation of "said adhesive having a modulus of elasticity at 85° C. of at least about 10,000 psi" while claim 20 does not include that limitation and instead includes a limitation that corresponds to the language omitted by 3M: "said film of structural adhesive comprising an epoxy resin and a latent hardener." Thus, the re-examination statement by Magna relied upon by 3M arguably favors Magna's position: Magna may have recognized that claim 20 does not include the specific modulus-of-elasticity limitation, and, thus, decided to distinguish that claim by relying on a limitation explicit in that claim. The Court's reading of the statement is supported by Magna's use of nearly identical language elsewhere during reexamination:

Ryan discloses the use of a polyvinyl butyral resin for adhering the base member to the windshield and, thus, teaches away from the claimed invention, which includes the use of a non-elastomeric, one-package, autoclave-curable, structural adhesive, *and with reference to independent patent claim 1 of the '236 patent*: a cured non-elastomeric, thermosetting, one-package, structural adhesive in contact with and adhered to the interior windshield surface, with the adhesive having a modulus of elasticity at 85° C of at least about 10,000 psi, and with the structural adhesive being a latent curing adhesive system capable of substantial cure at a temperature below about 325° F and requiring exposure to a temperature in excess of about 125° F before substantial curing is achieved; *or with reference*

to independent patent claims 20 and 35 of the '236 patent: a structural adhesive comprising an epoxy resin and a latent hardener.

(3M's Claim Constr. Br., Ex. D at D-276 (emphases added); *accord id.*, Ex. D at D-349.)

3M next relies on the following statement from the patent examiner during reexamination:

[T]he only subject matter of the claims which was not known in the prior art at the time of the invention was a thermosetting adhesive having the following characteristics: (1) *thermally activated at a temperature greater than about 125° F*; (2) *a cure temperature below 325° F*, and (3) *a modulus of elasticity at 85° C of at least 10,000 psi when cured.*

(3M's Claim Constr. Br. at 14 (citing 3M's Claim Constr. Br., Ex. D at D-321, emphasis in 3M's brief).) 3M avers that the examiner was referencing every claim of the '236 patent, and Magna failed to "argue with the examiner's characterization of all the claims." (3M's Claim Constr. Br. at 14.) 3M also says that Magna "affirmed that these limitations were indeed present in *each* independent claim." (*Id.*)

Again, context matters. The start of the paragraph containing the quoted language reads, "The Board of Patent Appeals and Interferences [during the prosecution of the parent application of the '236 patent] found that the only subject matter of the claims" (3M's Claim Constr. Br., Ex. D at D-321.) This introductory phrase is relevant because in responding to this assertion, Magna argued that due to the election/restriction requirement imposed during prosecution of the parent application, the BPAI's reasoning with regard to that application was inapplicable to the '236 patent.

For example, Magna argued:

the prior Board decision in the parent . . . application is not applicable to the claims of the '236 patent at least because (i) the parent application was divided and thus the divided claims are considered patentably distinct and different from the parent . . . application claims, (ii) the claims of the '236 patent were amended during prosecution, (iii) new claims have been added in the reexamination,

and (iv) the claims of the '236 patent and the new claims include limitations that were not part of the claims of the parent 071773,236 application, so therefore the claims of the '236 patent and the new claims added in this reexamination cannot have been considered by the Board in the prior case and thus the Board's decision in the parent 071773,236 application is not dispositive in this case and cannot be relied on as is done by the Examiner in the Office Action.

(3M's Claim Constr. Br., Ex. D at D-177.) The foregoing makes apparent that Magna did not affirm the examiner's characterization of the invention of the '236 patent as 3M suggests.⁴

Finally, primarily in its post-hearing letter-brief, 3M argues that the following passages from Magna's briefing to the BPAI during re-examination constitute a clear disavowal of claim scope:

Ono teaches use of a silicone rubber adhesive, such as a thermosetting type of *silicone rubber* composition (see column 4, lines 1-11 of Ono). The Office Action (at page 8) states that "Preferred adhesives include thermosetting adhesives (column 4, lines 1-11)." However, Appellant submits that what is disclosed in Ono is a thermosetting silicone rubber composition, which is not a non-elastomeric, thermosetting, one-package, structural adhesive that has a modulus of elasticity at 85 degrees C of at least about 10,000 psi. Moreover, Ono teaches away from such a non-elastomeric structural adhesive by teaching that the Ono adhesive provides elasticity or plasticity after heat-cured (see column 3, lines 35-39 of Ono).

(Dkt. 92-2, 3M's Claim Constr. Letter Br. at ECF Pg ID 5056; 3M's Claim Constr. Br., Ex. D at D-217.) 3M argues that this statement applies to all claims, including claims that do not have a 10,000-psi-at-85°-C limitation because, in subsequently distinguishing the other claims, Magna incorporated this disavowal by reference: "With respect to the rejection of independent claim 20 and claims 21-34

⁴3M points to a specific statement made by Magna during reexamination in support of its argument that Magna affirmed the patent examiner's characterization of the claims of the '236 patent. (3M's Claim Constr. Br. at 14 (citing *id.*, Ex. D at D-357).) But 3M appears to have mistakenly cited a statement that Magna made prior to the examiner's characterization. (*Compare* 3M's Claim Constr. Br., Ex. D at D-357, D-363 (dated December 28, 2007) *with* Ex. D at D-305, D-321 (office action dated December 22, 2008).)

depending therefrom, Appellant submits that the applied references do not disclose or suggest or render obvious the claimed invention *for at least the reasons set forth above.*” (*Id.*, Ex. D at D-221 (emphasis added).)

The emphasized language, however, does not provide that Magna was relying on each and every reason set forth above. In fact, several of the reasons “set forth above” distinguish the claims of the '236 patent without relying on the 10,000-psi-at-85°-C limitation. The examiner’s rejection was based on a combination of Ono in view of several other references: Stewart, Volkmann, Morgan, and certain adhesive handbooks. (*Id.*, Ex. D at D-216.) In response to the examiner’s reliance on Stewart, Magna provided that the reference taught an adhesive for mounting the reflective part of the rearview mirror to a mirror housing – it did not teach mounting a mirror button to a windshield. (*Id.*, Ex. D at D-217.) And Magna distinguished Volkmann by noting that the reference taught mounting by way of a windshield laser treatment and, thus, taught away “from use of its adhesive on a glass surface unless the laser treatment is provided at the glass surface.” (*Id.*) Further, after providing that claim 20 was not obvious “for at least the reasons set forth above,” Magna cited limitations specific to claim 20: “Independent claim 20 also includes the limitation that the film of structural adhesive comprises an epoxy resin and a latent hardener.” (*Id.*, Ex. D at D-222.) Accordingly, the Court is not convinced that in stating “for at least the reasons set forth above,” Magna meant “for at least [all] the reasons set forth above.”

A recent case from the Federal Circuit lends support to this conclusion. In *Digital-Vending Servs. Int’l, LLC v. Univ. of Phoenix, Inc.*, one of the accused infringers argued that the patentee disavowed registration servers that were not content free. 72 F.3d 1270, 1277 (Fed. Cir. 2012). As part of its argument, the defendant asserted that, to overcome the patent examiner’s rejection of

claims 1-3 and 7-15, the patentee provided four distinctions from the prior-art reference, including that the reference did not teach a content-free registration server. *Id.* According to the defendant, this disavowal applied to claims 16-37, claims that did not have the content-free limitation, because the inventors stated:

“The rejections of claims 16-37 under 35 U.S.C. § 103(a) rely on the same reasons set forth in the rejection of claims 1-3, 7-15. For the reasons explained above, the rejection of claims 16-37 should therefore be withdrawn as well.”

Id. The Federal Circuit concluded that this was not a clear disavowal in part because some of the four alleged differences applied to limitations in claims 16-37:

As noted above, the “reasons explained above” include four alleged differences between Sanu and the claimed invention. Some of these alleged differences were clearly relevant to claims 16-37, such as the requirement of a registration server. Hence, this general reference to arguments from the “Remarks on Claims 1-3, 7-15” section applies to arguments about claim language that was repeated in claims 16-37, such as Sanu’s failure to teach a registration server or a registration server for remote registration of a new user, as opposed to its failure to teach a content-free registration server.

Id.

Here, as in *Digital-Vending*, Magna’s references to the “reasons set forth above” arguably refers to those arguments that distinguish claim 20 (for example) based on limitations apparent in that claim (e.g., an adhesive for mirror buttons and, therefore, not an adhesive for the reflective element, and a mounting system that is autoclave compatible, and therefore, does not require laser-treated glass). Accordingly, the Court does not find this to be a clear disavowal of claim scope.

(d) Conclusion on Prosecution History Disclaimer

In sum, certain statements made by the patentees during prosecution of the '236 patent and its parent application, and those made by Magna during reexamination, support 3M's claim that the patentees or Magna disavowed any interpretation of "non-elastomeric" other than "having a modulus of elasticity when cured greater than about 10,000 psi at 85° C." But, ultimately, "[w]hen the . . . statements 'are considered in the context of the prosecution history as a whole, they simply are not clear and unmistakable enough to invoke the doctrine of prosecution history disclaimer.'" *Digital-Vending Servs.*, 672 F.3d at 1277 (citing *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1343 (Fed. Cir. 2009)).

4. The Court's Construction of "non-elastomeric"

Although the Court has rejected 3M's proposed construction, it remains that the term "non-elastomeric" has not been construed. Magna urges the Court to end its analysis here. The Court agrees with Magna that when parties dispute the meaning of a claim term, it is not always necessary to construe the term:

[W]hen two parties offer different constructions, or if one side argues for ordinary meaning, . . . the Court must first determine whether it has a duty to resolve the meaning and the scope. While it is a district court's duty is to construe the claims, part of this duty is to determine the extent [to] which . . . construction is even necessary. With regard to meaning, where additional language may be unduly limiting, confusing, or redundant, it is in a court's power to determine that no construction is necessary. A court may decline to adopt constructions that violate claim construction doctrine, such as improperly importing limitations, and may still construe terms to have their ordinary meaning.

National Oilwell Varco, L.P. v. Auto-Dril, Inc., No. 5:09cv85, 2011 WL 3648532, at *6 (E.D. Tex. Aug. 16, 2011). However, the Federal Circuit has made clear that declining to construe a claim term

is not appropriate when, absent a construction from the Court, the parties' claim dispute remains unresolved. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351 (Fed. Cir. 2008).

In *O2 Micro*, the patents-in-suit involved DC-to-AC converters that employed a feedback loop to control the amount of power delivered to cold cathode fluorescent lamps (lamps that, for example, light a laptop screen). 521 F.3d at 1354. During patent prosecution, the patentees added a claim limitation that the feedback control loop circuit manages the conduction state of the converter "only if" the feedback signal was above a predetermined threshold. *Id.* at 1356. The defendants argued that their accused controller did not meet this "only if" limitation when, for example, their controller was in its start-up phase. *Id.* at 1360-61. *O2 Micro*, however, maintained that the accused device could infringe so long as it met the "only if" limitation during steady-state operation (as opposed to at all times including start up). *See id.* at 1357, 1360. *O2 Micro* further argued that no construction of the claim term "only if" was necessary because the term consisted of only two plain English words. *Id.* at 1358. The district court agreed with *O2 Micro* and did not construe the term.

The Federal Circuit held that this was error: "in deciding that "'only if' needs no construction' because the term has a 'well-understood definition,' the district court failed to resolve the parties' dispute because the parties disputed not the *meaning* of the words themselves, but the *scope* that should be encompassed by this claim language." *Id.* at 1361 (internal quotation marks omitted). The Court of Appeals explained,

A determination that a claim term "needs no construction" or has the "plain and ordinary meaning" may be inadequate when a term has more than one "ordinary" meaning or when reliance on a term's "ordinary" meaning does not resolve the parties' dispute. In this

case, for example, the parties agreed that “only if” has a common meaning, but then proceeded to dispute the scope of that claim term, each party providing an argument identifying the alleged circumstances when the requirement specified by the claim term must be satisfied (e.g., at all times or during steady state operation). In this case, the “ordinary” meaning of a term does not resolve the parties’ dispute, and claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit.

O2 Micro, 521 F.3d at 1361. In remanding the case to the district court for further claim construction, the Federal Circuit emphasized, “[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.” *Id.* at 1362.

In view of *O2 Micro*, the Court believes a construction of the term “non-elastomeric” is necessary. Based on the arguments of the parties and a reading of the patent and its prosecution history, it is apparent that an adhesive resides on an elastomeric continuum: some are highly elastic whereas others are highly inelastic. If the Court were to forgo construction, it is likely that in arguing infringement the parties will not only dispute what side of the continuum 3M’s adhesives fall on, but will also dispute where the dividing line between elastomeric and non-elastomeric adhesives falls. For example, an argument that one of the accused adhesives is elastomeric invites an inquiry as to how one determines whether a material is or is not elastomeric. But this is at the heart of the parties’ claim construction dispute over this term. Accordingly, the Court believes a construction of the term “non-elastomeric” is proper.

Magna argues that, should the Court construe the term “non-elastomeric,” its plain and ordinary meaning (as understood by one skilled in the art in view of the patent) is “[n]ot an elastic substance resembling rubber.” (Magna’s Reply Claim Const. Br., Ex. A.) An authoritative common-language dictionary provides a similar definition for the term “elastomer”: “an elastic rubberlike substance (as a synthetic rubber or a plastic having some of the physical properties of

natural rubber).” *Webster’s Third New Int’l Dictionary*, 730 (1986). Technical dictionaries consulted by the Court are also in accord with this definition. *See Van Nostrand’s Scientific Encyclopedia*, Vol. I, 1709 (10th ed. 2008) (“Of natural or synthetic origin, an elastomer is a polymer possessing elastic (rubbery) properties.”); *McGraw-Hill Dictionary of Scientific and Technical Terms*, 687 (6th ed. 2003) (“A polymeric material, such as a synthetic rubber or plastic, which at room temperature can be stretched under low stress, to at least twice its original length and, upon immediate release of the stress, will return with force to its approximate original length.”). Accordingly, “non-elastomeric substance” means “not an elastic substance resembling rubber.”⁵

B. “Structural Adhesive”

Magna asserts that the term “structural adhesive” requires no construction and should be accorded its plain and ordinary meaning. (Magna’s Claim Constr. Br. at 10.) In the alternative, Magna says that the term should be construed as “[a]n adhesive designed to carry a load.” (Magna’s Reply to 3M’s Claim Constr. Br., Ex. A.)

3M disagrees with both assertions. According to 3M, the term “structural adhesive” should be construed as “An adhesive that is non-elastomeric (i.e., having a modulus of elasticity when cured greater than about 10,000 psi at 85° C) and has a cure temperature below about 325° F.” (3M’s Claim Constr. Br. at 8.)

The Court considers the two implicit limitations proposed by 3M – “[a]n adhesive that is non-elastomeric” and “[a]n adhesive . . . [having] a cure temperature below about 325° F.” – in turn.

⁵The Court notes that term at issue, “non-elastomeric,” is an adjective used to describe a substance. Magna’s definition of “non-elastomeric,” “[n]ot an elastic substance resembling rubber,” is a proposed construction of a noun. Neither party has raised this issue and the Court believes that the parties can apply the noun definition. Also, during the *Markman* hearing, both parties expressed a disinclination to have the Court further define “elastic.”

1. The Patentees Disavowed “elastomeric” Adhesives

Repeatedly and at various stages of the re-examination proceedings, Magna distinguished the adhesives of the '236 patent from the prior art on the basis that the prior-art adhesives were “elastomeric.” *See St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc.*, 412 F. App'x 270, 275-76 (Fed. Cir. 2011) (“Reexamination statements ‘are relevant prosecution history when interpreting claims.’” (quoting *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1439 (Fed. Cir. 1988))); *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1363 (Fed. Cir. 2007) (holding that “amendments and arguments during examination and reexamination” constituted a disavowal of claim scope). The disclaimers discussed below are unequivocal and given their repeated nature, the Court concludes that Magna clearly disavowed elastomeric adhesives from the scope of the claims of the '236 patent.

During re-examination, the patent examiner rejected all claims of the '236 patent as obvious in view of the prior art. (3M's Claim Constr. Br., Ex. D at D-402-17.) In particular, the examiner rejected independent claims 1, 20, and 35 (the only independent claims then present in the '236 patent) as unpatentable over Ryan (U.S. Patent No. 3,313,251) in view of Stewart (U.S. Patent No. 4,593,878) and other prior art. (*Id.*, Ex. D at D-407.) The examiner also rejected independent claims 1, 20, and 35 by relying on a different primary reference, Ono (U.S. Patent No. 5,160,780), but again in view of Stewart and other prior art references. (*Id.*, Ex. D at D-409.)

When Magna filed a response to the rejection, it distinguished the Ryan and Ono references by characterizing those references as teaching the use of “elastomeric” adhesives and providing that “the '236 patent went contrary to such conventional teaching and against the grain of the prior art teachings”:

Given that both Ono et al. and Ryan profess to be a solution for attaching mirror mounting buttons to windshields and given that both Ono et al. and Ryan consistently teach the use of an *elastomeric* material, and teaching away as they do from the *claimed subject-matter as claimed herein*, and given that the solutions to the problems provided by the '236 patent clearly escaped these prior artisans, a person of ordinary skill in this art would lack a reason to combine the elements of Ono et al. or Ryan and the other cited references to arrive at the combination of features that collectively and combined together constitute the claimed invention as set forth in the claims presented herein (Lynam Declaration, Paragraphs 47, 51-56, 63 and 64). Moreover, whereas the prior artisans taught the use of autoclave-curable *elastomeric adhesives* for attaching mirror mounting buttons to windshields, *the '236 patent went contrary to such conventional teaching and against the grain of the prior art teachings* and discloses and claims the use of an epoxy-based, one-package, autoclave-curable, structural adhesive film

Thus, the patent owner submits that features *of the claimed invention*, such as those features discussed above, escaped the prior artisans, such as the prior artisans in 1958 and in 1988 working on the Ryan and Ono et al. disclosures (Lynam Declaration, Paragraphs 42, 47, 51, 62 and 63). For example, the named inventors of the '236 patent used a *non-elastomeric*, one-package, autoclave-curable, structural adhesive film to obtain an unpredictable result, namely that mirror mounting systems need not use the *elastomeric* silicone material or polyvinyl butyral (PVB) material of Ono et al. and Ryan, and that the *non-elastomeric*, one-package, autoclave-curable, structural adhesive of the mirror mounting system *of the claimed invention* achieves enhanced vibration performance of the mirror and enhanced attachment of the mirror mounting button to the windshield

(*Id.*, Ex. D at D-338-39 (emphases added).) Elsewhere in the same office-action response, Magna reiterated:

The Agrawal et al. invention [i.e., the invention of the '236 patent] went *contrary to the conventional approach of use of elastomeric mirror button attachment adhesives*, and instead innovated the use of an autoclave compatible epoxy-based structural adhesive film to solve not just the mirror fall-off problem, but also to mitigate the mirror vibration problem of the prior conventional mirrors (Lynam Declaration, Paragraphs 20-23).

(*Id.*, Ex. D at D-340 (emphasis added); *see also id.*, Ex. D at D-267, D-284.) Magna also argued, “Moreover, the prior art of record, such as Ryan and Ono et al., teach to use an *elastomeric* PVB or *elastomeric* silicone adhesive, and thus teaches away from the *nonelastomeric*, autoclave-curable, one-package structural adhesive *of the claimed invention*.” (*Id.*, Ex. D at D-362 (emphases added).) Thus, in at least three passages of Magna’s response to the examiner’s rejection – a response filed in view of this litigation – Magna referred to the “claimed invention” as a whole and described the claimed invention as “nonelastomeric” in an attempt to distinguish, in Magna’s own words, the “elastomeric” prior art. Together, these statements constitute a clear disavowal of elastomeric structural adhesives.

The remainder of the patent re-examination proceedings underscores this conclusion. For example, Magna offered an affidavit from one of the named inventors and patentees of the '236 patent, Dr. Niall R. Lynam, in support of its office-action response. Dr. Lynam attested that in developing the invention of the '236 patent, the researchers did not seek an improved “elastomeric” adhesive but instead “innovated use of a non-elastomeric” adhesive:

20. In our innovation at Donnelly, we went contrary to [the] then conventional approach for an autoclave-compatible mirror button adhesive system [which used an elastomeric silicone adhesive] and instead of seeking an improved elastomeric adhesive such as the silicone espoused by the likes of Asahi and Dow, we at Donnelly . . . innovated use of a non-elastomeric autoclave-compatible epoxy-based structural adhesive system to solve not just the mirror fall-off problem but also to mitigate the mirror vibration problem described above.

(3M’s Claim Constr. Br., Ex. D at D-368.)

Dr. Lynam also strongly suggested that the “structural adhesive” of claim 20 does not include “elastomeric” structural adhesives. In particular, Dr. Lynam stated:

47. As indicated . . . in the Presentation attached hereto as Exhibit A, U.S. Patent No. 5,160,780 (“Ono '780”) discloses and claims use of an elastomeric silicone adhesive and teaches away from the '236 Patent’s use of a non-elastomeric adhesive comprising an epoxy resin and a latent hardener.

(*Id.*, Ex. D at D-374.) Claim 20 uses the term “structural adhesive” and then includes the following limitation: “said film of structural adhesive comprising an epoxy resin and a latent hardener.” (’236 patent, col. 9, ll. 46-47.) But in Dr. Lynam’s own words, the “elastomeric” prior art teaches away from a structural adhesive with this limitation. This suggests that the term “structural adhesive” in claim 20 excludes such adhesives.

After the examiner maintained his obviousness rejection, Magna appealed the decision to the Board of Patent Appeals and Interferences and again argued that while the prior art involved elastomeric adhesives, the claimed invention did not. Specifically, Magna stated, “Moreover, the prior art of record, such as Ryan and Ono, teach to use an *elastomeric* PVB or *elastomeric* silicone adhesive, and thus teaches away from the *nonelastomeric*, autoclave-curable, one-package structural adhesive of the claimed invention.” (*Id.*, Ex. D at D-239 (emphases added).) Similarly, in oral argument before the BPAI, Magna argued:

What the prior art reflects is selections of PVB adhesive and silicone adhesive. *We’re talking rubbery, cushioned, elastomeric-type prior art.* Stewart prior art reference is a primary reference relied on, is exemplary of the art at the time of the invention. It’s a *soft, rubbery* silicone that is used to adhere the windshield button to glass. . . . [T]he Ono reference, again, is a silicone reference, silicone disclosure. . . . Now, silicone was the putative solution that was used by the industry, and that’s what this patent is directed to be a departure from. *The use of an elastomeric, or cushiony, rubbery adhesive actually points away from the rigid, packaged, autoclaved assembly that are resident in the claims.*

(*Id.*, Ex. D at D-14-15 (emphases added).)

Given Magna's repeated, unequivocal statements during the re-examination proceedings of the '236 patent characterizing the prior art as elastomeric, the Court finds that Magna disclaimed such adhesives from the scope of all claims of the '236 patent. As such, the Court agrees with 3M's construction of the term "structural adhesive" to the extent that the term means "[a]n adhesive that is non-elastomeric."⁶

An analysis of the claims and the written description of the '236 patent does not alter this conclusion. Admittedly, an element of claim 1 is "a cured non-elastomeric . . . structural adhesive." ('236 patent, col. 8, ll. 11-13.) Thus, grafting an implicit "non-elastomeric" limitation onto the term "structural adhesive" would render the explicit "non-elastomeric" limitation in claim 1 surplusage. And the doctrine of claim differentiation also favors Magna's position. In contrast to claim 1, independent claims 20, 35, 43, and 46 use the term "structural adhesive" without the modifier "non-elastomeric." This omission suggests that the patentees did not intend to limit the term "structural

⁶In one of the slides Magna relied on during the *Markman* hearing (slide 28), Magna appears to challenge these prosecution history disavowals by pointing to a definition that the patentees provided during prosecution of the parent application:

The Examiner requested that Applicants illuminate the term "structural adhesive." Applicants have described the structural adhesives used in their invention on page 5, lines 4-10 of the application. To further respond to the Examiner's inquiry, Applicants provide the following definition of the term "structural adhesive" from the Dictionary of Scientific and Technical Terms, McGraw-Hill, 1974:

An adhesive capable of bearing loads of considerable magnitude: a structural adhesive will not fail when a bonded joint prepared from the thickness of metal, or other material typical for that industry, is stressed to its yield point.

(3M's Claim Constr. Br., Ex. B at B-93.) But the McGraw-Hill definition, read in context, indicates that the patentees did not adopt this definition for the claim term "structural adhesive." Rather, the patentees simply provided a definition to the examiner for reference or comparison purposes.

adhesive” in claims 20, 35, 43, and 46 in the same way that they limited the term in claim 1.

On the other hand, the written description supports the Court’s conclusion on prosecution-history disclaimer. First, in the “BRIEF SUMMARY OF THE INVENTION,” the patentees described the “structural adhesive” of the “present invention” as “non-elastomeric”:

The *present invention* comprises a vehicle accessory mounting button, windshield arrangement and a method for making the same *which uses nonelastomeric*, thermosetting, structural adhesives to adhere an accessory mounting button to the interior surface of a windshield. It has been surprisingly found that *nonelastomeric*, thermosetting, structural adhesives provide outstanding long-term adhesion and good accessory assembly vibration performance even under rigorous climate conditions while simultaneously being compatible with conventional autoclaving processes used in windshield manufacturing.

(’236 patent, col. 2, ll. 44-54 (emphases added).) Elsewhere in the specification the patentees contrasted “elastomeric” prior art from a “nonelastomeric” preferred embodiment of the invention:

In addition to the improved bonding performance which results from use of structural adhesives such as AF-163-2, these adhesives are *nonelastomeric* and, as such, have a modulus of elasticity, when cured, greater than about 30,000 psi at 25° C. and greater than about 10,000 psi at 85° C. Thus, they exhibit superior vibration performance when compared to *elastomeric* materials such as plasticized PVB and silicones Plasticized PVB has a modulus of elasticity of about 1000-1500 psi at 25° C. and 260 psi at 85° C. whereas silicones, which are *elastomeric* materials also conventionally used as a mirror mounting adhesive, typically have a modulus of elasticity of below 500 psi at 85° C.

(’236 patent, col. 7, ll. 49-62 (emphases added).)

Moreover, as noted in this Court’s analysis of the term “non-elastomeric,” if there is a clear disavowal of claim scope, the canons of claim construction that favor Magna’s position must yield. As the Federal Circuit has explained:

The doctrine of claim differentiation can shed light on the proper

scope to be afforded a claim limitation, for there is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant. However, the doctrine of claim differentiation does not serve to broaden claims beyond their meaning in light of the specification, and does not override clear statements of scope in the specification and the prosecution history.

Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1302 (Fed. Cir. 1999) (internal citations, alterations, and quotation marks omitted); *see also Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1359 (Fed. Cir. 2012) (“[C]laim differentiation is ‘not a hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history.’”).

In short, an analysis of the claims supports Magna’s construction that the patentees did not disavow elastomeric structural adhesives. On the other hand, the specification supports the contrary conclusion. The patent read as a whole is therefore ambiguous on the issue of disclaimer, and, in view of Magna’s unequivocal statements during patent re-examination, the Court concludes that the ’236 patent itself “does not override clear statements of scope . . . in the prosecution history.” *See Toro*, 199 F.3d at 1302. Accordingly, the term “structural adhesive” as used in the claims of the ’236 patent is limited to those adhesives that are “non-elastomeric.”

2. The Patentees Did Not Define the Term “structural adhesives” As Having a Cure Temperature Below About 325° F. Nor Was There a Clear Disavowal of Structural Adhesives With Higher Cure Temperatures

3M also claims that the term “structural adhesive” includes a further implicit limitation. (3M’s Claim Constr. Br. at 8.) In particular, 3M argues that the patentees defined the term “structural adhesive” as having a cure temperature below about 325° F., and, further, disavowed structural adhesives that do not cure below about 325° F. (3M’s Claim Constr. Br. at 9-10, 11, 13-

15.) For the following reasons, the Court does not agree.

The Court begins with the claims of the '236 patent. Claim 20 of the '236 patent does not include a limitation that the adhesive cure at “below about 325° F.” But claim 22 – which is a dependent of claim 20 – provides “said curing of said film occurs at a temperature greater than about 125° F. and less than about 325° F.” ('236 patent, col. 9, ll. 50-52.) Thus, under 3M’s curing-temperature construction of the term “structural adhesive,” part of claim 22 would be rendered superfluous. *See Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (explaining that “the claim differentiation tool works best in the relationship between independent and dependent claims” because “reading an additional limitation from a dependent claim into an independent claim would not only make that additional limitation superfluous, it might render the dependent claim invalid”). In addition, independent claims 1, 35, and 46 include the cure-at-below-about-325°-F. limitation whereas independent claims 20 and 43 do not. Accordingly, the doctrine of claim differentiation disfavors 3M’s patentee-as-lexicographer and disavowal arguments.

3M argues that, in the written description, the patentees “clearly defined their structural adhesives as . . . having a cure temperature below 325° F.” (3M’s Claim Constr. Br. at 10 (emphasis removed).) 3M cites the following language (which appears twice in the specification): “Thermosetting structural adhesives suitable to achieve the objectives of this invention include one-package epoxies, preferably in film form, which have a cure temperature below 325° F” ('236 patent, ABSTRACT; '236 patent, col. 3, ll. 3-14.) But, as Magna correctly points out, the operative word is “include”: the patentees did not state that all structural adhesives suitable to achieve the objectives of the invention have a cure temperature below 325° F., but instead provided that among the structural adhesives suitable to achieve the objectives of the invention are those that

cure at below 325° F. *See Webster's Third New Int'l Dictionary*, 1143 (1986) (defining include, “2a: to place, list, or rate as a part or component of a whole or of a larger group, class, or aggregate.”). Accordingly, in making this statement, the patentees did not “clearly express an intent,” *see Thorner*, 669 F.3d at 1365, to set forth a definition of “structural adhesive” that excludes adhesives that do not cure below about 325° F.

3M's second written-description argument is stronger. 3M says that prior to the filing of the '236 patent, it was selling the structural adhesive film AF-42, which has a cure temperature of about 330° F, for bonding mirror buttons to glass windshields. (Dkt. 96, 3M's 2d Claim Constr. Letter Brief at ECF Pg ID 5117.) 3M argues that Magna therefore distinguished AF-42 in the following section of the written description:

It is important to stress that the cure of the SCOTCH-WELD AF-163-2 structural adhesive occurs simultaneous with, and in the same process step as, the windshield autoclave lamination step. Thus, it is important that the cure temperature be less than 325° F. This obviates the need to preattach mounting buttons with high temperature cure adhesives (such as structural adhesive film AF-42 from 3M Company, St. Paul, Minn.) to bent glass prior to the lamination process in a separate operation involving processing temperatures in excess of that tolerated by the laminating interlayers in common use.

('236 patent, col. 4, ll. 23-33.) 3M also points out that the specification provides that “temperatures in excess of 325° F. must be avoided so as to reduce any deterioration of the [windshield] interlayer material.” (3M's 2d Claim Constr. Letter Brief at ECF Pg ID 5118 (citing '236 patent, col. 1, ll. 31-33).) Magna appears to concede that AF-42 is not one of the adhesives within the scope of the claims of the '236 patent. (*See* Dkt. 97, Magna's Claim Constr. Letter Br. at ECF Pg ID 5134; *see also* 3M's Claim Constr. Br., Ex. D at D-192, D-218.) “Thus,” says 3M, “Magna made clear that the claimed structural adhesives require a cure temperature less than 325° F.” (3M's 2d Claim

Constr. Letter Brief at ECF Pg ID 5118.)

Magna responds that “AF-42 is not autoclave compatible *and* does not cure below 325° F.” (Magna’s Claim Constr. Letter Br. at ECF Pg ID 5134 (emphasis added).) Magna points out that claims 20 and 43 already include an express limitation that excludes AF-42 (and, apparently, other “high temperature cure adhesives”). (See Dkt. 97, Magna’s Claim Constr. Letter Br. at ECF Pg ID 5134.) In particular, those two claims require that “said curing of said film [of a one-package, structural adhesive] and said lamination of said windshield being achieved in the *same autoclave process*.” (See '236 patent, col. 10, ll. 38-45 (emphasis added); '236 patent reexam. cert., col. 1, ll. 38-45 (emphasis added).)

The Court agrees with Magna that in claims 1, 35, and 46, the patentees implicitly excluded AF-42 by excluding adhesives that do not cure below about 325° F., but, in claims 20 and 43, the patentees selected different language – “curing . . . in the same autoclave process” – to implicitly exclude AF-42. Indeed, the language cited by 3M provides that using AF-42 would require preattaching mounting buttons “in a separate operation involving processing temperatures in excess of that tolerated by the laminating interlayers in common use.” ('236 patent, col. 4, ll. 27-33.) The Court therefore finds that claims 20 and 43 include an express limitation that resolves the tension between the AF-42 language in the specification and the “structural adhesive” referenced in the claims. An implicit 325° F. limitation is therefore not demanded by the specification or prosecution history language cited by 3M.⁷

⁷Magna leaves unanswered the next obvious question of *why* AF-42 cannot be cured during windshield lamination in the same autoclave process as claims 20 and 43 require. The likely – but perhaps not only – answer is that AF-42 does not cure below about 325° F. But 3M has not shown that the cure temperature is the only possibility because it may be that the time, pressure, and temperature combination for autoclave lamination precludes the use of AF-42.

3M next argues that several statements from the patent prosecution history support its assertion that the patentees or Magna clearly disavowed those structural adhesives that do not cure below about 325° F. 3M begins with the parent application. (3M's Claim Constr. Br. at 11.) In responding to an examiner's rejection of the claims in the parent application, the patentees argued:

To achieve the objectives of the invention, an adhesive having a cure temperature below 325° F is utilized to reduce any deterioration of the polymeric interlayer between the layer between the windshield panels. . . .

(3M's Claim Constr. Br., Ex. B at B-152-53.) The Court has already discussed this passage in the context of construing the term "non-elastomeric." For the same reasons that the Court found that this language was not a clear disavowal of structural adhesives with a modulus of elasticity less than about 10,000 psi at 85° C., the Court concludes that this statement was not a clear disavowal of those structural adhesives that cure above about 325° F. In particular, each of the then-pending parent application claims included the limitation of "having a cure temperature below 325° F." (3M's Claim Constr. Br., Ex. B at B-128, B-130.) In contrast, independent claims 20 and 43 of the '236 patent have no such limitations. Thus, it is not apparent that the "objectives" of the invention of the parent application and the '236 patent are coextensive.

3M also says the following statement made by the patentees during prosecution of the '236 patent evidences a clear disavowal of claim scope: "[T]he invention is also concerned with . . . a . . . structural adhesive which is capable of substantial cure at temperatures below about 325°F. . . ." (3M's Claim Constr. Br. at 13 (quoting 3M's Claim Constr. Br., Ex. C at C-66).) But the word "also" suggests that the patentees were not describing the full extent of the claimed invention. This inference is strengthened when the statement is read in context:

The invention is concerned with mirror mounting systems prepared

by laminating glass windshield panels together . . . while simultaneously adhering a mirror mounting button to one of the panels using a thermosetting, one-package *structural adhesive which is cured by the same autoclave process used for laminating the windshield panels together.*

The invention is *also* concerned with a mirror mounting button, windshield arrangement wherein the mirror mounting button is adhered to the windshield by a thermosetting, one-package, structural adhesive which is capable of substantial cure at temperatures below about 325°F and which requires exposure to temperatures in excess of about 125°F before substantial curing is achieved. None of the references of record provide any teaching or suggestion for a laminated windshield which is prepared using an autoclave process wherein glass panels are laminated using a polymeric interlayer, while a mirror mounting button is simultaneously adhered to one of the glass layers using a thermosetting, one-package structural adhesive *which is cured in the same autoclave process.* Further, none of the references of record teach or suggest a mirror mounting button, windshield arrangement wherein a one-package, thermosetting structural adhesive is used for adhering a mirror mounting button to a windshield.

(*Id.*, Ex. C at C-66-67 (emphases added).) The paragraph preceding the statement relied upon by 3M provides that the invention is “concerned with” an adhesive that cures in the “same autoclave process used for laminating the windshield panels together”; it does not specify a particular curing temperature. The second paragraph then states that the invention is “also” concerned with an adhesive that “is capable of substantial cure at temperatures below about 325°F.” Read together, the two paragraphs arguably discuss two aspects, i.e., two “concern[s]” of the claimed invention. Moreover, the second paragraph states that the prior art did not teach or suggest a windshield/mirror button arrangement where the button is adhered with an adhesive that is cured in an autoclave process. This distinction does not rely on a bright-line 325 °F. curing temperature. Accordingly, the Court cannot conclude that these statements are so clear as to be an “unmistakable” disclaimer of claim scope. *See Omega Eng’g*, 334 F.3d at 1325.

Finally, 3M cites two statements made by Magna during the re-examination proceedings as proof that Magna disclaimed structural adhesives that do not cure at below about 325° F. (3M's Claim Constr. Br. at 7, 14.) But the Court has already found that each of these statements did not constitute a clear disavowal of adhesives having a modulus of elasticity of less than about 10,000 psi at 85° C. and the same reasoning applies here.

This Court concluded that the first passage from the prosecution history (*see* 3M's Claim Constr. Br. at 7) was not a clear disclaimer that applied to all claims because 3M omitted language indicating that Magna did not intend to distinguish claim 20 on the basis of an implicit specific modulus of elasticity limitation. In particular, the Court concluded that the omitted "or" language indicated that Magna intended to distinguish claim 20 over the prior art based on its own, explicit limitations whereas the language quoted by 3M served to distinguish claim 1. *See supra* Part III.A.3.(c). The same reasoning applies here because, as noted, claim 20 does not include the cure-below-about-325°-F. limitation whereas claim 1 does.

As for the second alleged disavowal cited by 3M (3M's Claim Constr. Br. at 14), this Court explained that the examiner characterized the novel aspects of the '236 patent based on the BPAI's characterization of the novel aspects of the parent application. *See supra* Part III.A.3.(c). The Court also explained that instead of affirming that the examiner's characterization applied to all claims of the '236 patent, Magna argued that the BPAI's reasoning with regard to the parent application was inapplicable to the '236 patent. *See supra* Part III.A.3.(c). It follows that the Court disagrees with 3M's claim that Magna disavowed structural adhesives with a cure temperature above about 325° F. because it affirmed the examiner's characterization that this limitation was present in all claims of the '236 patent. (*See* 3M's Claim Constr. Br. at 14.)

3. *The Court's Construction of "structural adhesive"*

In sum, the Court finds that Magna clearly disclaimed structural adhesives that are "elastomeric" during re-examination proceedings. The Court also finds, however, that neither the patentees of the '236 patent nor Magna defined the term "structural adhesives" as only those adhesives having a cure temperature below about 325° F, nor did they disclaim structural adhesives with a higher cure temperature. Magna asserts that the plain and ordinary meaning of the term "structural adhesive" is "[a]n adhesive designed to carry a load." Modified to account for Magna's disavowal of elastomeric structural adhesives and this Court's construction of "non-elastomeric," the Court concludes that the term "structural adhesive" as used in the claims of the '236 patent means "a non-elastomeric adhesive (i.e., not an elastic adhesive resembling rubber) designed to carry a load."

C. "autoclave process"

Magna asserts that the claim term "autoclave process" – which appears in every independent claim except claim 1 – requires no construction from the Court and should be accorded its plain and ordinary meaning. (Magna's Claim Constr. Br. at 8; *see also* Magna's Reply Claim Constr. Br. at 9.) Alternatively, Magna asserts that the plain and ordinary meaning of the term "autoclave process" is "a process in which elevated pressure or temperature can be established." (Magna's Reply Claim Constr. Br. at 9.)

3M says that the term "autoclave process" means "[a] process of cycling between multiple steady-states of pressure and elevated temperatures." (3M's Claim Constr. Br. at 16.) Although acknowledging that the patent specification only describes a "typical[]" autoclave process, 3M says that the patentees and Magna disclaimed any meaning of the term autoclave without two "important"

characteristics: “(1) it is a cycle of multiple steady states and (2) those states refer to conditions of pressure and temperature.” (*Id.*) While the Court agrees with 3M that Magna did disclaim certain meanings of the term “autoclave process,” the Court does not believe there has been a clear disavowal that supports the entirety of 3M’s definition.

As an initial matter, neither of the two prosecution history statements 3M cites supports its implicit limitation of a “steady-state,” i.e., “a state or condition of a system or process . . . that does not change in time, *Webster’s Third New International Dictionary*, 2232 (1986). During the prosecution of the parent application, in response to an examiner rejection, the patentees stated:

The Ryan patent, which issued nearly 30 years ago in 1964, generally represents the industry standard for affixing mirrors to vehicle windshields by use of a layer of PVB The present invention in contrast, utilizes adhesives having particular characteristics which, when utilized in *an integrated mounting and lamination process defined by particular cycle temperatures and pressures*, results in exceptional adhesion of the mirror to the windshield and resistance to fatigue or failure at the adhesion site from vibration and from environmental exposure, as set forth in the examples beginning on page 11 of the present application. Thus, the present invention provides a clearly superior alternative to the teachings of Ryan.

(3M’s Claim Constr. Br., Ex. B at B-9 (emphasis added).) The emphasized language makes no mention of a “steady state” or that the “particular cycle temperatures and pressures” must be constant for any period of time.

3M also relies on an alleged disclaimer from the patent re-examination proceedings. There, the examiner found the invention of the '236 patent obvious because (1) the BPAI had found the method of the parent application obvious, and (2) the assembly claimed in the '236 patent could be produced by that obvious method. (*See* 3M’s Claim Constr. Br., Ex. D at D-319.) On appeal to the BPAI, Magna argued that this syllogism did not hold and provided, as a counter example, that claim

37 of the parent application was “not restricted to an autoclave process whereas (and in sharp contrast) issued claim 35 of the '236 patent (formerly application claim 52) affirmatively requires ‘curing the film in an autoclave process’” (*Id.*, Ex. D at D-191; *see also id.*, Ex. D at D-189.) The examiner then responded that, while the claims of the parent application were not limited to the use of an autoclave process, the parent claims “encompassed an autoclave process operated at [the 125° F to 325° F] temperature range and there is no evidence of record that autoclave curing produces an unexpected or non-obvious product or result.” (*Id.*, Ex. D at D-133.) In replying to the examiner’s response, Magna made the disclaimer that 3M now relies upon:

The Examiner’s Answer also states that, “while broader, the claims of the 07/773,236 application encompassed an autoclave process operated at that temperature range and there is no evidence of record that autoclave curing produces an unexpected or non-obvious product or result.” First, *Appellant submits that autoclave curing is much more than just a temperature range, but includes pressure and the likes of cycling between temperatures.* For example, an autoclave process may involve a cycle such as: 20 minutes at 180 degrees F; 20 minutes at 285 degrees F and 200 psi; and cool to room temperature, such as disclosed in column 1 of the '236 Patent. . . .

(*Id.*, Ex. D at D-79 (emphasis added).) But the emphasized language does not unambiguously state that a “pressure” or “cycling between temperatures” be fixed for any unit of time. Accordingly, the Court rejects 3M’s construction to the extent that it requires “steady states.”⁸

Absent the steady-state limitation, 3M’s construction reads as follows: “a process of cycling between multiple [states] of pressure and elevated temperatures.” But this is still too narrow. The

⁸It is true that the patent specification provides for two 20-minute steady states: “an autoclave process typically involves a cycle such as: 20 minutes at 180° F; 20 minutes at 285° F and 200 psi; and cool to room temperature.” ('236 patent, col. 1, ll. 25-30.) But as apparent from the use of “typically” and “such as,” this was merely an example and, therefore, cannot constitute a definition or disavowal of claim scope.

statements cited by 3M from the prosecution history do not support a change from “multiple . . . elevated temperatures.” Magna’s statement during prosecution of the parent application – “an integrated mounting and lamination process defined by particular cycle temperatures and pressures” – suggests that an autoclave process involves multiple temperatures but does necessarily require that there be more than one “elevated” temperature. For example, the statement does not preclude the possibility of the following “cycle temperatures”: room temperature when the windshield is inserted in the autoclave, a single, elevated temperature while the windshield is in the autoclave, and a return to room temperature when the windshield is removed from the autoclave. Likewise, Magna’s reexamination statement that autoclave curing “includes pressure and the likes of cycling between temperatures” does not unambiguously require “a cycle between [elevated] temperatures.” Again, it is possible that Magna may have envisioned a “cycle” like the Court’s example.

The Court does agree with 3M, however, that Magna clearly disavowed an autoclave process that does not involve “pressure.” In particular, Magna’s re-examination statement that “autoclave curing is much more than just a temperature range, but includes pressure and the likes of cycling between temperatures” is unambiguous and a clear disavowal of claim scope. *See Webster’s Third New International Dictionary*, 1143 (1986) (defining “include” as “to place, list, or rate as a part or component of a whole or of a larger group, class, or aggregate.”). This statement was made in rebuttal to the examiner’s obviousness argument and was therefore relevant to patentability. It was also related to the claims of the '236 patent (as opposed to those of the parent application) and was not limited to any particular claim. Further, inherent in Magna’s statement that autoclave curing includes “pressure” is that the pressure is something other than the ambient pressure surrounding the autoclave. Accordingly, the Court finds that this was a clear disavowal of claim scope and that

an “autoclave process” includes the use of “pressure.” A corollary of this conclusion is that the same re-examination statement was a clear disavowal of an autoclave process that does not include “the likes of cycling between temperatures.”

Thus, neither of the parties’ definitions are fully supported by the intrinsic evidence. The Court has already pointed out that 3M’s definition is too narrow in at least two respects: the requirement of a steady state limitation and the requirement of multiple elevated temperatures. On the other hand, Magna’s proposed definition – “a process in which elevated pressure and temperature *can be* established” (Magna’s Reply Claim Constr. Br. at 9 (emphasis added)) – allows for the possibility that the autoclave process might not apply any pressure or change in temperature. It is therefore too broad in view of Magna’s re-examination disclaimer.

Given all of the foregoing, the Court construes “autoclave process” to mean “a cycle in which elevated pressure and elevated temperature are established.”⁹

IV. CONCLUSION AND RECOMMENDATION

For the foregoing reasons, the Court RECOMMENDS the following constructions of the disputed claim terms:

- “non-elastomeric” means “not an elastic substance resembling rubber”;
- “structural adhesive” means “a non-elastomeric adhesive (i.e., not an elastic adhesive resembling rubber) designed to carry a load”; and
- “autoclave process” means “a cycle in which elevated pressure and elevated

⁹The Court notes that, although “elevated” is a relative term, neither party has objected its use – in fact, both parties’ proposed constructions use the term. The Court further notes that, at the *Markman* hearing, both parties seemed to disfavor adding the limitations on “autoclave process” that appear to be present in the claims (e.g., that the autoclave process is sufficient to laminate a windshield).

temperature are established.”

V. FILING OBJECTIONS

The parties to this action may object to and seek review of this Report and Recommendation within fourteen (14) days of service of a copy hereof as provided for in 28 U.S.C. § 636(b)(1). Failure to file specific objections constitutes a waiver of any further right of appeal. *Thomas v. Arn*, 474 U.S. 140 (1985); *Frontier Ins. Co. v. Blaty*, 454 F.3d 590, 596 (6th Cir. 2006); *United States v. Sullivan*, 431 F.3d 976, 984 (6th Cir. 2005). The parties are advised that making some objections, but failing to raise others, will not preserve all the objections a party may have to this Report and Recommendation. *McClanahan v. Comm’r Soc. Sec.*, 474 F.3d 830 (6th Cir. 2006) (internal quotation marks omitted); *Frontier*, 454 F.3d at 596-97. Objections are to be filed through the Case Management/Electronic Case Filing (CM/ECF) system or, if an appropriate exception applies, through the Clerk’s Office. *See* E.D. Mich. LR 5.1. A copy of any objections is to be served upon this magistrate judge but this does not constitute filing. *See* E.D. Mich. LR 72.1(d)(2). Once an objection is filed, a response is due within fourteen (14) days of service, and a reply brief may be filed within seven (7) days of service of the response. E.D. Mich. LR 72.1(d)(3), (4).

s/Laurie J. Michelson
LAURIE J. MICHELSON
UNITED STATES MAGISTRATE JUDGE

Dated: June 15, 2012

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing order was served on the attorneys and/or parties of record by electronic means or U.S. Mail on June 15, 2012.

s/Jane Johnson
Deputy Clerk

Appendix A: Claim Constructions proposed by Magna, 3M, and the Court.

Claim Term	Magna's Proposed Construction	3M's Proposed Construction	Court's Proposed Construction
"non-elastomeric"	<p>Plain and ordinary meaning. If the Court construes this term, Magna proposes that the plain and ordinary meaning is:</p> <p>"Not an elastic substance resembling rubber."</p>	"Having a modulus of elasticity when cured greater than about 10,000 psi at 85° C."	"Not an elastic substance resembling rubber."
"structural adhesive"	<p>Plain and ordinary meaning. If the Court construes this term, Magna proposes that the plain and ordinary meaning is:</p> <p>"An adhesive designed to carry a load."</p>	"An adhesive that is non-elastomeric (i.e., having a modulus of elasticity when cured greater than about 10,000 psi at 85° C) and has a cure temperature below about 325° F."	"A non-elastomeric adhesive (i.e., not an elastic adhesive resembling rubber) designed to carry a load."
"autoclave process"	<p>Plain and ordinary meaning. If the Court construes this term, Magna proposes that the plain and ordinary meaning is:</p> <p>"A process in which elevated pressure and temperature can be established." (See Magna's Reply to 3M's Claim Constr. Br at 9.)</p>	"A process of cycling between multiple steady-states of pressure and elevated temperatures."	"A cycle in which elevated pressure and elevated temperature are established"